

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A membrane electrode assembly for an electrochemical fuel cell comprising: two fluid diffusion layers; an ion-exchange membrane interposed between the fluid diffusion layers; an electrocatalyst layer disposed at the interface between the ion-exchange membrane and each of the fluid diffusion layers; a fluid impermeable integral seal impregnated into the fluid diffusion layers in sealing regions thereof; and a barrier film interposed between the ion-exchange membrane and the fluid impermeable integral seals, wherein the barrier film extends beyond the sealing region in the direction towards the reactive area of the ion-exchange membrane along at least a portion of the sealing region of at least one of the fluid diffusion layers, and wherein the barrier film is more chemically stable to acid hydrolysis than the integral seal.

2. (Withdrawn) The membrane electrode assembly of claim 1 wherein the barrier film is between the electrocatalyst layer and the fluid diffusion layer.

3. (Withdrawn) The membrane electrode assembly of claim 1 wherein the barrier film is between the ion-exchange membrane and the electrocatalyst layer.

4. (Original) The membrane electrode assembly of claim 1 wherein the barrier film is impregnated into the fluid diffusion layer.

5. (Original) The membrane electrode assembly of claim 1 wherein the fluid impermeable integral seal comprises silicone.

6. (Original) The membrane electrode assembly of claim 5 wherein the barrier film is a thermoplastic or a thermoset.

7. (Original) The membrane electrode assembly of claim 5 wherein the barrier film is polyvinylidene fluoride, polypropylene, polyethylene, polyolefins, PTFE, polyaryl ethers, PEEK, polysulfone, polyimide, epoxy, polyurethane, nitrile, butyl, or TPEs.

8. (Original) The membrane electrode assembly of claim 1 wherein the barrier film is a thermoplastic or a thermoset.

9. (Original) The membrane electrode assembly of claim 1 wherein the barrier film is polyvinylidene fluoride, polypropylene, polyethylene, polyolefins, PTFE, polyaryl ethers, PEEK, polysulfone, polyimide, epoxy, polyurethane, nitrile, butyl, or TPEs.

10. (Original) The membrane electrode assembly of claim 1 wherein the at least one of the fluid diffusion layers is the cathode fluid diffusion layer.

11. (Original) The membrane electrode assembly of claim 1 wherein the at least one of the fluid diffusion layers is both the anode and cathode fluid diffusion layers.

12. (Original) The membrane electrode assembly of claim 1 wherein the sealing regions circumscribe a central, electrochemically active area.

13. (Original) The membrane electrode assembly of claim 12 wherein the barrier film circumscribes the central, electrochemically active area.

14. (Original) The membrane electrode assembly of claim 1 wherein the fluid impermeable integral seal extends laterally beyond the ion-exchange membrane and the fluid

diffusion layers to thereby envelope a peripheral region of both of the fluid diffusion layers and the ion-exchange membrane.

15.-34 (Canceled)